

APPENDIX A

EXAMPLE COMMAND ALIAS

In an exemplary system environment **200** as shown in **Fig. 2**, the following Command Alias file is located in the #pragma Namespace ("\\.\root\ops") on a management station **202**:

Example: (Win32_NetworkAdapter class command alias)

```
instance of Microsoft_CliAlias
{
    Connection =
    instance of Microsoft_CliConnection
    {
        Locale = "ms_409";
        NameSpace = "ROOT\\CIMV2";
        Server = "BAMBAZONKI";
    };
    Descriptions = {
        instance of Microsoft_CliLocalizedString
        {
            CodePage = 401;
            Text = "The Win32_NetworkAdapter class represents a
network adapter on a Win32 system.";
        }};
    Formats = {
        instance of Microsoft_CliFormat
        {
            Name = "FULL";
            Properties = {
                instance of Microsoft_CliProperty
                {
                    Derivation = "AdapterType";
                    Descriptions = {
                        instance of
Microsoft_CliLocalizedString
                        {
                            CodePage = 401;
                            Text = "The AdapterType
property reflects the network medium in use. This property may not be
applicable to all types of network adapters listed within this class.
Windows NT only.";
                        }};
                    Name = "AdapterType";
                },
                instance of Microsoft_CliProperty
                {
```

```

        Derivation = "AutoSense";
        Descriptions = {
            instance of
5      Microsoft_CliLocalizedString
            {
                CodePage = 401;
                Text = "A boolean indicating
whether the network adapter is capable of automatically determining the
10      speed of the attached/network media.";
            };;
            Name = "AutoSense";
        },
        instance of Microsoft_CliProperty
        {
15      Derivation = "Availability";
        Descriptions = {
            instance of
Microsoft_CliLocalizedString
20      {
                CodePage = 401;
                Text = "The availability and
status of the device. For example, the Availability property indicates
that the device is running and has full power (value=3), or is in a
warning (4), test (5), degraded (10) or power save state (values 13-15
25      and 17). Regarding the power saving states, these are defined as
follows: Value 13 (\\"Power Save - Unknown\\") indicates that the device
is known to be in a power save mode, but its exact status in this mode
is unknown; 14 (\\"Power Save - Low Power Mode\\") indicates that the
device is in a power save state but still functioning, and may exhibit
30      degraded performance; 15 (\\"Power Save - Standby\\") describes that the
device is not functioning but could be brought to full power 'quickly';
and value 17 (\\"Power Save - Warning\\") indicates that the device is in
a warning state, though also in a power save mode.";
            };;
35      Name = "Availability";
        },
        instance of Microsoft_CliProperty
        {
40      Derivation = "Caption";
        Descriptions = {
            instance of
Microsoft_CliLocalizedString
45      {
                CodePage = 401;
                Text = "The Caption property
is a short textual description (one-line string) of the object.";
            };;
            Name = "Caption";
        },
50      instance of Microsoft_CliProperty
        {
            Derivation = "ConfigManagerErrorCode";
            Descriptions = {
                instance of
55      Microsoft_CliLocalizedString
            {

```

```

CodePage = 401;
Text = "Indicates the Win32
Configuration Manager error code.";
    });
5     Name = "ConfigManagerErrorCode";
    },
    instance of Microsoft_CliProperty
    {
10     Derivation = "ConfigManagerUserConfig";
    Descriptions = {
        instance of
Microsoft_CliLocalizedString
        {
15     CodePage = 401;
    Text = "Indicates whether the
device is using a user-defined configuration.";
        });
    Name = "ConfigManagerUserConfig";
    },
20    instance of Microsoft_CliProperty
    {
        Derivation = "CreationClassName";
    Name = "CreationClassName";
    },
25    instance of Microsoft_CliProperty
    {
        Derivation = "Description";
    Descriptions = {
        instance of
30    Microsoft_CliLocalizedString
        {
            CodePage = 401;
            Text = "The Description
35    property provides a textual description of the object. ";
        });
    Name = "Description";
    },
    instance of Microsoft_CliProperty
    {
40    Derivation = "DeviceID";
    Descriptions = {
        instance of
Microsoft_CliLocalizedString
        {
45    CodePage = 401;
    Text = "The DeviceID property
contains a string uniquely identifying the network adapter from other
devices on the system.";
        });
50    Name = "DeviceID";
    },
    instance of Microsoft_CliProperty
    {
55    Derivation = "ErrorCleared";
    Descriptions = {

```



```

        Descriptions = {
            instance of
Microsoft_CliLocalizedString
5
            {
                CodePage = 401;
                Text = "The Installed property
determines whether the network adapter is installed in the
system.\nValues: TRUE or FALSE. A value of TRUE indicates the network
adapter is installed.";
10
            };;
            Name = "Installed";
        },
        instance of Microsoft_CliProperty
        {
15
            Derivation = "LastErrorCode";
            Descriptions = {
                instance of
Microsoft_CliLocalizedString
20
                {
                    CodePage = 401;
                    Text = "LastErrorCode captures
the last error code reported by the logical device.";
                };;
            Name = "LastErrorCode";
25
        },
        instance of Microsoft_CliProperty
        {
            Derivation = "MACAddress";
            Descriptions = {
30
                instance of
Microsoft_CliLocalizedString
                {
                    CodePage = 401;
                    Text = "The MACAddress
35
property indicates the media access control address for this network
adapter. A MAC address is a unique 48-bit number assigned to the network
adapter by the manufacturer. It uniquely identifies this network adapter
and is used for mapping TCP/IP network communications.";
                };;
            Name = "MACAddress";
40
        },
        instance of Microsoft_CliProperty
        {
            Derivation = "Manufacturer";
            Descriptions = {
45
                instance of
Microsoft_CliLocalizedString
                {
                    CodePage = 401;
                    Text = "The Manufacturer
50
property indicates the name of the network adapter's
manufacturer.\nExample: 3COM.";
                };;
            Name = "Manufacturer";
55
        },
        instance of Microsoft_CliProperty

```

```

    {
        Derivation = "MaxNumberControlled";
        Descriptions = {
            instance of
5      Microsoft_CliLocalizedString
                {
                    CodePage = 401;
                    Text = "The
10      MaxNumberControlled property indicates the maximum number of directly
            addressable ports supported by this network adapter. A value of zero
            should be used if the number is unknown.";
                }
            };
        Name = "MaxNumberControlled";
    },
15      instance of Microsoft_CliProperty
    {
        Derivation = "MaxSpeed";
        Descriptions = {
            instance of
20      Microsoft_CliLocalizedString
                {
                    CodePage = 401;
                    Text = "The maximum speed, in
25      bits per second, for the network adapter.";
                }
            };
        Name = "MaxSpeed";
    },
    instance of Microsoft_CliProperty
    {
30      Derivation = "Name";
        Descriptions = {
            instance of
            Microsoft_CliLocalizedString
                {
35      CodePage = 401;
                    Text = "The Name property
            defines the label by which the object is known. When subclassed, the
            Name property can be overridden to be a Key property.";
                }
            };
        Name = "Name";
    },
    instance of Microsoft_CliProperty
    {
45      Derivation = "NetworkAddresses";
        Descriptions = {
            instance of
            Microsoft_CliLocalizedString
                {
50      CodePage = 401;
                    Text = "An array of strings
            indicating the network addresses for an adapter.";
                }
            };
        Name = "NetworkAddresses";
    },
55      instance of Microsoft_CliProperty
    {

```

```

Derivation = "PermanentAddress";
Descriptions = {
    instance of

```

```

Microsoft_CliLocalizedString

```

```

5      {
          CodePage = 401;
          Text = "PermanentAddress
defines the network address hard coded into an adapter. This 'hard
10      coded' address may be changed via firmware upgrade or software
configuration. If so, this field should be updated when the change is
made. PermanentAddress should be left blank if no 'hard coded' address
exists for the network adapter.";

```

```

          });
          Name = "PermanentAddress";
      },
      instance of Microsoft_CliProperty
      {

```

```

          Derivation = "PNPDeviceID";
          Descriptions = {
20      instance of
Microsoft_CliLocalizedString
          {
              CodePage = 401;
              Text = "Indicates the Win32
25      Plug and Play device ID of the logical device. Example: *PNP030b";
          });
          Name = "PNPDeviceID";
      },
      instance of Microsoft_CliProperty

```

```

30      {
          Derivation =
"PowerManagementCapabilities";
          Descriptions = {
              instance of
35      Microsoft_CliLocalizedString
          {
              CodePage = 401;
              Text = "Indicates the specific

```

```

40      power-related capabilities of the logical device. The array values,
0=\ "Unknown\ ", 1=\ "Not Supported\ " and 2=\ "Disabled\ " are self-
explanatory. The value, 3=\ "Enabled\ " indicates that the power
management features are currently enabled but the exact feature set is
unknown or the information is unavailable. \ "Power Saving Modes Entered
Automatically\ " (4) describes that a device can change its power state
45      based on usage or other criteria. \ "Power State Settable\ " (5) indicates
that the SetPowerState method is supported. \ "Power Cycling Supported\ "
(6) indicates that the SetPowerState method can be invoked with the
PowerState input variable set to 5 (\ "Power Cycle\ "). \ "Timed Power On
Supported\ " (7) indicates that the SetPowerState method can be invoked
50      with the PowerState input variable set to 5 (\ "Power Cycle\ ") and the
Time parameter set to a specific date and time, or interval, for power-
on.";

```

```

          });
          Name = "PowerManagementCapabilities";
      },
      instance of Microsoft_CliProperty

```

```

{
    Derivation = "PowerManagementSupported";
    Descriptions = {
        instance of
5   Microsoft_CliLocalizedString
        {
            CodePage = 401;
            Text = "Indicates that the
10  device can be power managed - i.e. can be put into suspend mode, etc.
    This boolean does not indicate that power management features are
    currently enabled, only that the logical device is capable of power
    management.";
        }
    };
    Name = "PowerManagementSupported";
15  },
    instance of Microsoft_CliProperty
    {
        Derivation = "ProductName";
        Descriptions = {
20  instance of
    Microsoft_CliLocalizedString
        {
            CodePage = 401;
            Text = "The ProductName
25  property indicates the product name of the network adapter.\nExample:
    Fast EtherLink XL";
        }
    };
    Name = "ProductName";
30  },
    instance of Microsoft_CliProperty
    {
        Derivation = "ServiceName";
        Descriptions = {
35  instance of
    Microsoft_CliLocalizedString
        {
            CodePage = 401;
            Text = "The ServiceName
40  property indicates the service name of the network adapter. This name is
    usually shorter than the full product name. \nExample: Elnkii.";
        }
    };
    Name = "ServiceName";
45  },
    instance of Microsoft_CliProperty
    {
        Derivation = "Speed";
        Descriptions = {
50  instance of
    Microsoft_CliLocalizedString
        {
            CodePage = 401;
            Text = "An estimate of the
    current bandwidth in bits per second. For endpoints which vary in
    bandwidth or for those where no accurate estimation can be made, this
55  property should contain the nominal bandwidth.";
        }
    };
}

```

```

        Name = "Speed";
    },
    instance of Microsoft_CliProperty
    {
        Derivation = "Status";
        Descriptions = {
            instance of
Microsoft_CliLocalizedString
            {
10                CodePage = 401;
                Text = "The Status property is
a string indicating the current status of the object. Various
operational and non-operational statuses can be defined. Operational
statuses are \"OK\", \"Degraded\" and \"Pred Fail\". \"Pred Fail\"
15 indicates that an element may be functioning properly but predicting a
failure in the near future. An example is a SMART-enabled hard drive.
Non-operational statuses can also be specified. These are \"Error\",
\"Starting\", \"Stopping\" and \"Service\". The latter, \"Service\",
could apply during mirror-resilvering of a disk, reload of a user
20 permissions list, or other administrative work. Not all such work is on-
line, yet the managed element is neither \"OK\" nor in one of the other
states.\";

                }};
        Name = "Status";
    },
    instance of Microsoft_CliProperty
    {
        Derivation = "StatusInfo";
        Descriptions = {
            instance of
Microsoft_CliLocalizedString
            {
                CodePage = 401;
                Text = "StatusInfo is a string
35 indicating whether the logical device is in an enabled (value = 3),
disabled (value = 4) or some other (1) or unknown (2) state. If this
property does not apply to the logical device, the value, 5 (\"Not
Applicable\"), should be used.\";

                }};
        Name = "StatusInfo";
    },
    instance of Microsoft_CliProperty
    {
        Derivation = "SystemCreationClassName";
        Name = "SystemCreationClassName";
    },
    instance of Microsoft_CliProperty
    {
        Derivation = "SystemName";
        Name = "SystemName";
    },
    instance of Microsoft_CliProperty
    {
        Derivation = "TimeOfLastReset";
        Descriptions = {
55

```

```

instance of
Microsoft_CliLocalizedString
{
    CodePage = 401;
    Text = "The TimeOfLastReset
property indicates when the network adapter was last reset.";
    };
    Name = "TimeOfLastReset";
    };
    };
    FriendlyName = "Win32_NetworkAdapter";
    Target = "Select * from Win32_NetworkAdapter";
    Verbs = {
        instance of Microsoft_CliVerb
        {
            Derivation = "SetPowerState";
            Descriptions = {
                instance of Microsoft_CliLocalizedString
                {
                    CodePage = 401;
                    Text = "SetPowerState defines the desired
power state for a logical device and when a device should be put into
that state. The desired power state is specified by setting the
PowerState parameter to one of the following integer values: 1=\"Full
Power\", 2=\"Power Save - Low Power Mode\", 3=\"Power Save - Standby\",
4=\"Power Save - Other\", 5=\"Power Cycle\" or 6=\"Power Off\". The Time
parameter (for all state changes, except 5, \"Power Cycle\") indicates
when the power state should be set, either as a regular date-time value
or as an interval value (where the interval begins when the method
invocation is received). When the PowerState parameter is equal to 5,
\"Power Cycle\", the Time parameter indicates when the device should
power on again. Power off is immediate. SetPowerState should return 0 if
successful, 1 if the specified PowerState and Time request is not
supported, and some other value if any other error occurred.\";
                };
                Name = "SetPowerState";
                Parameters = {
                    instance of Microsoft_CliParam
                    {
                        ParaId = "PowerState";

                        Type = "UINT16";
                        Descriptions;

                    },
                    instance of Microsoft_CliParam
                    {
                        ParaId = "Time";

                        Type = "DATETIME";
                        Descriptions;

                    }
                };
            };
            Usages = {

```

```

        instance of Microsoft_CliLocalizedString
        {
            CodePage = 401;
            Text = "SetPowerState";
        };
    },
    instance of Microsoft_CliVerb
    {
        Derivation = "Reset";
        Descriptions = {
            instance of Microsoft_CliLocalizedString
            {
                CodePage = 401;
                Text = "Requests a reset of the logical
15 device. The return value should be 0 if the request was successfully
                executed, 1 if the request is not supported and some other value if an
                error occurred.";
            };
        Name = "Reset";
        Usages = {
            instance of Microsoft_CliLocalizedString
            {
                CodePage = 401;
                Text = "Reset";
            };
        };
    };
};

```

APPENDIX B

EXAMPLE XSL FILE

In an exemplary system environment **200** as shown in **Fig. 2**, the following XSL files are used to format the display for a list of properties returned through a command alias:

Example 1: (WmiCmdTableFormat.xsl)

```
<?xml version="1.0" ?>
<xsl:stylesheet xmlns:xsl="http://www.w3.org/TR/WD-xsl">
  <xsl:template match="/" xml:space="preserve">
    Name: Value:
    <xsl:for-each select="CIM//INSTANCE/PROPERTY">
      <xsl:value-of select="@NAME" />
      :
      <xsl:value-of select="VALUE" />
    </xsl:for-each>
  </xsl:template>
</xsl:stylesheet>
```

Example 2: (WmiCmdValueFormat.xsl)

```
<?xml version="1.0" ?>
<xsl:stylesheet xmlns:xsl="http://www.w3.org/TR/WD-xsl">
  <xsl:template match="/" xml:space="preserve">
    <xsl:for-each select="CIM//INSTANCE/PROPERTY">
      <xsl:value-of select="VALUE" />
    </xsl:for-each>
  </xsl:template>
</xsl:stylesheet>
```

APPENDIX C

COMMAND LINE BNF

<WMICommand>	::=	WMIC [<global switch list>] <command>
<global switches list>	::=	<global switches> <global switches><global switches list>
<global switches>	::=	(/NAMESPACE /ROLE) [:<namespace>] /NODE [:<machine id>] /IMPLEVEL [:<ilevel>] /AUTHLEVEL [:<alevel>] /LOCALE [:<locale identifier>] /PRIVILEGES [:<property>] /TRACE [:<option>] /RECORD [:<file path>] /INTERACTIVE /USER [:<user id>] /PASSWORD [:<password id>] /? [:<help type>]
<command >	::=	(<alias> [<WMI object>] [<alias>] <path where>) [<verb clause>] EXIT CLASS [<class path expression >] [<verb clause>]
<path where>	::=	PATH (<path expression> <class path expression>) WHERE <where clause>
<alias>	::=	!! name for the alias. The name will be unique in the context of the namespace in which the alias is defined. Note CLASS, PATH, WHERE and EXIT cannot be used as alias names as they appear in the same location in the syntax.
<WMI object>	::=	<alias parameters>
<path expression>	::=	!! A WMI path expression including a key clause
<where clause>	::=	!! A WQL where clause
<class path expression >		!! A WMI path expression that does not include key clause
<alias parameters>	::=	!! one or more space delimited literals that will be used as substitutions in the alias's PWhere value. Note this and the three previous productions terminate with either a "/" character indicating a switch or verb or with the end of line marking the termination of the command
<verb clause>	::=	(<verb> [<verb parameters>] <standard verb>) [<verb switches>]
<verb>	::=	<property name> <identifier> <method name>
<verb switches>	::=	/INTERACTIVE /NOINTERACTIVE

<verb parameter>	::=	<actual parameter> <actual parameter> , <verb parameter>
<standard verb>	::=	<get verb> <list verb> <assoc verb> <call verb> <set verb>
<identifier>	::=	<idhead> [<idrest>]
<idhead>	::=	<letter>
<idrest>	::=	<identifier> [<letter> <digit>]
<get verb>	::=	GET [<property list>] [<get switches>]
<property list>	::=	<property name> <property name> , <property list>
<list verb>	::=	LIST [<list format> <list switches>]
<assoc verb>	::=	ASSOC [<format specifier>]
<call verb>	::=	CALL <method name> [<actual parameter list>]
<actual parameter list>	::=	<actual parameter> <actual parameter> , <actual parameter list>
<set verb>	::=	SET <assign list>
<assign list>	::=	<property name> = <property value> <property name> = <property value> <assign list>
<get switches>	::=	/VALUE /ALL /TRANSLATE /EVERY :<interval> /FORMAT [:<format specifier>] /DESCRIPTION [:<code page>]
<interval>	::=	!! numeric value indicating frequency within which values should be returned
<formatspecifier>	::=	:<xsl file name> :TABLE :MOF
<list format>	::=	BRIEF INSTANCE SYSTEM STATUS FULL <user format>
<list switches>		/TRANSLATE /EVERY :<interval> /FORMAT [:<format specifier>]
<help type>	::=	: BRIEF : FULL

APPENDIX D

EXAMPLES OF COMMAND LINE PROCESSING

General

A.1 Global Switches (Qualifiers) Usage:

5 Global switches (to the right of the "\$ wmic") denote operations that operate at the full context of the command. Therefore, these switchers apply to an entire session established by the command.

\$ wmic /?

10 Display command global switches and all registered aliases.

\$ wmic /locale 40b

specify Finnish for localization (impersonation)

\$ wmic /NODE

15 Which node to connect to for getting info

\$ wmic /NODE /? //Discover mgmt arenas <based on namespaces>
defaults to \\root\\cli>

20 Network - manage the network subsystem namespace
Apps - manage applications namespace
System - manage operating system namespace
Devices- manage devices namespace
Users - manage users namespace
25 DB - manage DBAs namespace

\$ wmic /NODE \\root\\cimv2 //Escape to preferred namespace

30 **\$ wmic /NODE \\remoteServerA \\root\\cimv2\\applications**
set operations against aliases on the specified namespace of **remoteServerA**
\\root\\cimv2\\applications

35 **\$ wmic /NODE system /?** //Discover any available sub scopes

40 Processor - manage the network subsystem <alias>
Bios - manage BIOS functions
Disks - manage storage
LogDrives - manage logical drive partitions
Process - manage operating processes
Service - manage system services
DCOM - manage DCOM Configuration
Scheduling - manage jobs

\$ wmic /trace
output all debugging info to {stderr}

5

A.2 Command Line Alias

An example of a printer alias is as follows:

\$ wmic printer
Where 'printer' is defined as an alias for WIN32_PRINTER is
equivalent to the following class escape:

\$ wmic CLASS WIN32_PRINTER

10

15

A.3 Verb Usage

Standard Verb Operations

\$ wmic {alias} {verb} /?

20

[Display description, switches, and parameters]
[Display description, verb, and Keyword info for the specified alias. Verbs
available to aliases (*Only supported standard verbs for an alias will be shown*) include:

GET	Data get operations
SET	Data set operations
CALL	Method, execution operations
LIST	Show data (like netsh, etc.)
ASSOC	Associate operation/data according to specified format.

25

GET Operations

\$ wmic {alias} GET /?

30

Display get switches and all properties for the specified object and its
descriptions. If the object was an ALIAS - only the properties that are defined
for that alias are displayed (**whether view object, scopes, containers, etc.**).

These properties map to properties on the referred to WMI OBJECT but can have
different (user friendly) names. If the object was a WMI CLASS NAME
(eg. wmic CLASS WIN32_PRINTER GET /?) then the properties come from the
class itself.

35

GET SWITCHES include:

/VALUE (default)	Return value (mapped if required)
/DESCRIPTION	Return description
/ALL	Return the data and metadata for attribute
/TRANSLATE	Translate return value via UNIX TR semantics. Useful for exporting to CSVs
/EVERY	Return values every (X interval) seconds

40

/FORMAT

Keyword OR XSL filename to process XML
Results.

Example of a user-friendly command:

\$ wmic system\process GET /FORMAT :TABLE * EXECUTABLEPATH

401	E:\Program Files\Internet Explorer\IEXPLORE.EXE
402	E:\WINNT\system32\psxss.exe
1232	E:\WINNT\system32\msiexec.exe

A user-friendly command:

\$ wmic system\process GET /DESCRIPTION : 401 ExecutablePath

PageFaults

PageFileUsage PageFileUsage

HANDLE 401 A string used to identify the process. A process
ID is a process handle.

ExecutablePath E:\Program Files\Internet Explorer\IEXPLORE.EXE
The ExecutablePath property indicates the path
to the executable file of the process

PageFaults 3062 The PageFaults property indicates the number
of page faults generated by the process.

The user-friendly command:

**\$ wmic system\process WHERE (Caption = "SPOOLSV.EXE") GET Threads , Faults
/FORMAT : TABLE /EVERY :15**

532	10	3062
532	12	3093
532	11	3102

...

A new line is printed every 15 seconds

Is equivalent to the following:

**\$ wmic CLASS WIN32_PROCESS WHERE (Caption = "SPOOLSV.EXE") GET
ThreadCount, PageFaults /FORMAT :TABLE /EVERY: 15**

532	10	3062
532	12	3093
532	11	3102

...

**# Note that different property names from the previous example.
The previous example had # user-friendly names but this refers to
the WMI class so it uses its property names.**

SET Operations

The interactive command syntax:

\$ wmic users\accounts WHERE(domain=Redmond AND disabled=false AND locked=true) SET disabled=true /INTERACTIVE

disable account Redmond\Travism[y/n]y
account disabled
disable account Redmond\UserJoe[y/n]n
account skipped
disable account Redmond\j-mier[y/n]y
account disabled

LIST Operations

\$ wmic {alias} LIST /?

[Display swithes and options. Switches include:

/FULL	Return the full set of properties
/BRIEF	Return a BRIEF set of the properties
/INSTANCE	Return just the instance names
/TRANSLATE	Translate return value via UNIX TR semantics. Useful for exporting to CSVs
/EVERY	Return values every X (specified interval) seconds
/SYSTEM	Show system properties
/FORMAT	Specify an XSL to format data
/STATUS	Show the status of the object
/CONFIG	Return the configuration of the component
<user format>	Show what the user format is.

The user-friendly command syntax:

\$ wmic system\process LIST

HANDLE	NAME	PATH
=====	=====	=====
401	IEXPLORE.EXE	E:\Program Files\Internet Explorer\IEXPLORE.EXE
402	psxss.exe	E:\WINNT\system32\psxss.exe
1232	msiexec.exe	E:\WINNT\system32\msiexec.exe
1103	svchost.exe	E:\WINNT\System32\svchost.exe
...		

The user-friendly command syntax, using BRIEF qualifier:

\$ wmic system\process 1103 LIST brief

Handle 1103

```

Name svchost.exe
ExecutionPath E:\WINNT\System32\svchost.exe
PageFaults 3062
PageFileUsage 3481600
...

```

The user-friendly command syntax, using FULL switch:

```

$ wmic system\process 401list full
Caption = "notepad.exe";
CreationClassName = "Win32_Process";
CreationDate = "20000414150141.596597-420";
CSCreationClassName = "Win32_ComputerSystem";
CSName = "JSNOVER004";
Description = "notepad.exe";
ExecutablePath = "E:\\WINNT\\System32\\notepad.exe";
Handle = "1172";
HandleCount = 21;
KernelModeTime = "36852992";
MaximumWorkingSetSize = 1413120;
MinimumWorkingSetSize = 204800;
Name = "notepad.exe";
OSCreationClassName = "Win32_OperatingSystem";
OSName = "Microsoft Windows 2000 Professional
[E:\\WINNT\\Device\\Harddisk0\\Partition2";
OtherOperationCount = "9";
OtherTransferCount = "0";
PageFaults = 299;
PageFileUsage = 282624;
ParentProcessId = 288;
PeakPageFileUsage = 290816;
PeakVirtualSize = "14680064";
PeakWorkingSetSize = 1105920;
Priority = 8;
PrivatePageCount = "282624";
ProcessId = 401;
QuotaNonPagedPoolUsage = 1876;
QuotaPagedPoolUsage = 17284;
QuotaPeakNonPagedPoolUsage = 1928;
QuotaPeakPagedPoolUsage = 17988;
ReadOperationCount = "0";
ReadTransferCount = "0";
SessionId = 0;
ThreadCount = 1;
UserModeTime = "4907056";
VirtualSize = "14667776";
WindowsVersion = "5.0.2195";
WorkingSetSize = "1101824";
WriteOperationCount = "0";

```

WriteTransferCount = "0";

\$ wmic system\process where (name = svchost.exe) list full

Handle 1103
Name svchost.exe
ExecutionPath E:\WINNT\System32\svchost.exe
PageFaults 3062
PageFileUsage 3481600
...

Advanced Scenarios Available to the User

I want to be able to list printers on a server, view status like out of paper...

\$ wmic /NODE:servername devices\printer LIST DetectedErrorState

Name	Port	DetectedErrorState
====	====	=====
HP LaserJet 4Si	LPT1:	No Error
\\ntprint\By DaveTh	40_hall2 npide99b9	No Paper
\\corp1\ntprinter2	44_4 aod444	Low Toner

+++++

I want to be able to pause or delete jobs, change properties...

\$ wmic printjob Where(Name=\\corp1\ntprinter2 and Size > 1000000) kill /interactive

146 Microsoft Word - DVD-RAM.doc [y/n]y
deleted
147 Microsoft Word - Life of Brian.doc[y/n]n
148 Microsoft Word - Whistler Plan[y/n]Y
deleted

+++++

I also want to restrict certain printer description to 48 chars for DOS clients even though schema allows 256.

**\$ wmic CLASS WIN32_printer WHERE (Name=HP LaserJet 4Si) SET DESCRIPTION
"this is a test of the length of a description"**

**\$ wmic printer WHERE (Name=HP LaserJet 4Si) SET DESC "this is a test of the
length of a description"**

ERROR: Text ("this is a test of the length of a description") too long

**#Note that the first one succeed and it's name was "Description" the
second one failed and it's name was DESC. This is because the Alias
specified as PROPERTY DESC that mapped to DESCRIPTION but had**

additional semantic/restrictions. In this case it had a short MAX_LENGTH

+++++
need help occasionally because i can't always remember the syntax...

\$ wmic /ROLE/?

Network
Apps
System
Devices
Users
DB

\$ wmic system /?

Processor
Bios
Disks
LogDrives
Process
Service
DCOM
Scheduling

\$ wmic system\printer /?

PRINTER
GET - Get parameters
SET - Set Parameters
CYCLE - Cycle Power
SETPOWERSTATE - Set power state
.....

\$ wmic system\printer GET /?

Property	Type	Operation
====	====	=====
Availability	INT16	Read-Only
AveragePagesPerMinute	INT32	Read-Only
Caption	String	ReadWrite
DriverName	String	Read-Only
PortName	String	Read-Only
...		

\$ wmic system\printer SET /?

1	100
2	100
3	100
4	100
5	100
6	100
7	100
8	100
9	100
10	100
11	100
12	100
13	100
14	100
15	100
16	100
17	100
18	100
19	100
20	100
21	100
22	100
23	100
24	100
25	100
26	100
27	100
28	100
29	100
30	100
31	100
32	100
33	100
34	100
35	100
36	100
37	100
38	100
39	100
40	100
41	100
42	100
43	100
44	100
45	100
46	100
47	100
48	100
49	100
50	100
51	100
52	100
53	100
54	100
55	100
56	100
57	100
58	100
59	100
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77	100
78	100
79	100
80	100
81	100
82	100
83	100
84	100
85	100
86	100
87	100
88	100
89	100
90	100
91	100
92	100
93	100
94	100
95	100
96	100
97	100
98	100
99	100
100	100

known to be in a power save mode, but its exact status in this mode is unknown; 14 ("Power Save - Low Power Mode") indicates that the device is in a power save state but still functioning, and may exhibit degraded performance; 15 ("Power Save - Standby") describes that the device is not functioning but could be brought to full power 'quickly'; and value 17 ("Power Save - Warning") indicates that the device is in a warning state, though also in a power save mode.

\$ wmic system/printer CALL !? : full

<i>Call</i>	<i>Input Param(s)&Type</i>	<i>Status</i>
=====	=====	=====
<i>reset</i>		<i>Implemented</i>

Description:

Requests a reset of the logical device. The return value should be 0 if the request was successfully executed, 1 if the request is not supported and some other value if an error occurred.

<i>Call</i>	<i>Input Param(s)&Type</i>	<i>Status</i>
=====	=====	=====
<i>setpowerstate</i>	<i>powerstate(int16)</i> <i>time(date/time)</i>	<i>Implemented</i>

Description:

SetPowerState defines the desired power state for a logical device and when a device should be put into that state. The desired power state is specified by setting the PowerState parameter to one of the following integer values: 1="Full Power", 2="Power Save - Low Power Mode", 3="Power Save - Standby", 4="Power Save - Other", 5="Power Cycle" or 6="Power Off". The Time parameter (for all state changes, except 5, "Power Cycle") indicates when the power state should be set, either as a regular date-time value or as an interval value (where the interval begins when the method invocation is received). When the PowerState parameter is equal to 5, "Power Cycle", the Time parameter indicates when the device should power on again. Power off is immediate. SetPowerState should return 0 if successful, 1 if the specified PowerState and Time request is not supported, and some other value if any other error occurred.